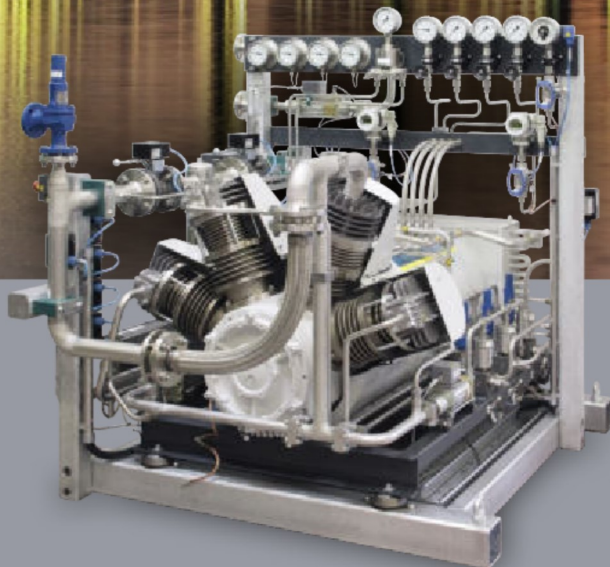




Sauer Compressors

HAUG



Oil-free piston compressor

- 7.5–30 kW
- Suction pressure max. 31 bar(abs)
- Final pressure max. 101 bar(abs)
- 400–1000 Nm³/h
- Gas-tight with magnetic coupling

HAUG.Sirius



OIL FREE



ZERO LEAKAGE



HIGH EFFICIENCY

Dependable up to 500 bar – anywhere, anytime, anygas.



1-stage version

The 1-stage type is used in particular for high delivery rates. Suction pressure is selectable up to a maximum of 31 bar(abs). The pressure ratio depends on the gas compressed and ranges from 3:1 to 8:1. The types used are always dependent on the gases to be compressed. The flow rate increases in proportion to the suction pressure. The maximum final pressure is about 61 bar(abs) for 1-stage design.

Haug twin-booster compressor system
HAUG.Sirius, 4 cylinder, air-cooled
(3000 x 2085 x 1850 mm, approx. 1700 kg)

2-stage version

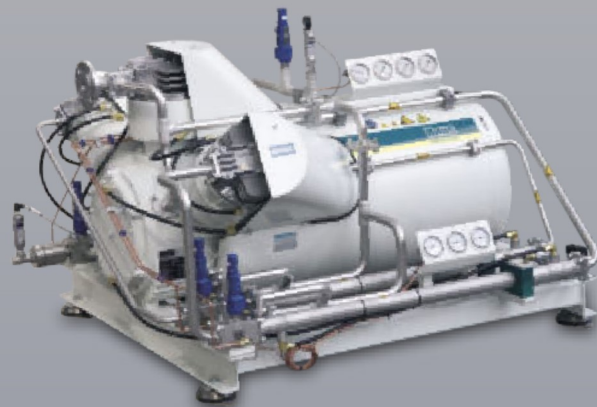
The 2-stage type allows pressure ratios of 9:1 to 30:1, depending on the gas compressed. Suction pressure can be selected up to a maximum of 31 bar(abs). The 2-stage compression arrangement with intercooling improves efficiency and lowers compression temperatures.

3- and 4-stage version

The 3-stage type allows pressure ratios of 27:1 to 90:1, depending on the gas compressed. This type is used in particular for storage of gases, such as natural gas, helium, hydrogen and air. For gases with high compression temperatures such as helium or for high delivery pressures a 4-stages compressor is being used.



HAUG.Sirius for C₃F₈ compression
4 cylinders, air-/water-cooled
(1800 x 1300 x 1100 mm, approx. 800 kg)



HAUG.Sirius for helium recovery
3 cylinders, 3-stage, water-cooled
(1600 x 1050 x 1100 mm, approx. 650 kg)



Oil-free booster compression of oxygen

HAUG oxygen compressors are used as boosters for an on-site gas production plant. Oxygen is generated using a PSA-, VPSA- or membrane system. Depending on the process, the pressure from the gas generation plant is either at atmospheric pressure (VPSA) or at around 4 bar (PSA). Depending on the application for which the oxygen is being used, the pressure has to be increased. This is achieved using a booster compressor.

The oxygen compatibility is ensured by high quality materials and a completely oil-free compression. The compressor components that come into contact with the medium are specially selected and cleaned for operation with oxygen.

Oil-free booster compression of nitrogen and air (CDA = Clean Dry Air)

HAUG nitrogen compressors are used as boosters for an on-site gas production plant or for a pressure increase from an existing pressurized nitrogen network. As a result of the oil-free and gas-tight construction, contamination of the gas by oil or ambient air is prevented.

Oil-free compressed air booster compressors are used for a local pressure increase at the workplace. Raising the pressure locally saves energy and money. The central compressed air supply is operated at a lower pressure. Only a partial compressed air flow is compressed to the higher final discharge pressure by the booster compressor.



HAUG.Sirius compressors for oxygen compression

| | min. suction pressure in bar(abs) | average suction pressure in bar(abs) | max. suction pressure in bar(abs) | max. final discharge pressure in bar(abs) | Flow rate in Nm ³ /h at average suction pressure and motor speed of 1450 rpm | Motor power in kW |
|-----------------------------|-----------------------------------|--------------------------------------|-----------------------------------|---|---|-------------------|
| HAUG.Sirius 21G 100 LM-L | 4.0 | 5.0 | 6.0 | 12 | 259 | 15.0 |
| HAUG.Sirius 31G 100 LM-L | 4.0 | 5.0 | 6.0 | 12 | 384 | 22.0 |
| HAUG.Sirius 22G 90-60 LM-L | 4.0 | 5.0 | 6.0 | 26 | 104 | 11.0 |
| HAUG.Sirius 42G 90-60 LM-L | 4.0 | 5.0 | 6.0 | 26 | 203 | 22.0 |
| HAUG.Sirius 22G 160-90 LM-L | 1.0 | 1.2 | 1.4 | 11 | 76 | 15.0 |
| HAUG.Sirius 42G 160-90 LM-L | 1.0 | 1.2 | 1.4 | 11 | 148 | 30.0 |

HAUG.Sirius compressors for compression of nitrogen and air

| | min. suction pressure in bar(abs) | average suction pressure in bar(abs) | max. suction pressure in bar(abs) | max. final discharge pressure in bar(abs) | Flow rate in Nm ³ /h at average suction pressure and motor speed of 1450 rpm | Motor power in kW |
|----------------------------|-----------------------------------|--------------------------------------|-----------------------------------|---|---|-------------------|
| HAUG.Sirius 21G 120 LM-L | 6.0 | 7.5 | 9.0 | 12 | 590 | 18.5 |
| HAUG.Sirius 31G 120 LM-L | 6.0 | 7.5 | 9.0 | 12 | 877 | 30.0 |
| HAUG.Sirius 21G 100 LM-L | 6.0 | 8.0 | 10.0 | 15 | 428 | 18.5 |
| HAUG.Sirius 31G 100 LM-L | 6.0 | 8.0 | 10.0 | 15 | 635 | 30.0 |
| HAUG.Sirius 22G 80-50 LM-L | 6.0 | 7.5 | 9.0 | 36 | 120 | 15.0 |
| HAUG.Sirius 42G 80-50 LM-L | 6.0 | 7.5 | 9.0 | 36 | 235 | 30.0 |



Oil-free recovery and compression of SF₆ gas

SF₆ gas is a halogen compound which has a very negative impact on the environment. The greenhouse effect of SF₆ is 23,900 times greater as for the same quantity of CO₂. SF₆ gas is one of the six greenhouse gases which are prohibited from freely escaping into the atmosphere. The harmful effect on the environment makes the safe and gas-tight use of SF₆ an important issue for the whole society. It is absolutely essential to use gas-tight equipment and gas-tight processes in connection with SF₆.

HAUG SF₆ compressors are used throughout the world by leading manufacturers of SF₆ recovery plants for gas-tight and oil-free compression.

| HAUG.Sirius compressors for compression of SF ₆ gas | | | | | | |
|--|-----------------------------------|-----|--------------------------------------|------|---|-------------------|
| | min. suction pressure in bar(abs) | | average suction pressure in bar(abs) | | max. suction pressure in bar(abs) | |
| | | | | | Flow rate in Nm ³ /h at average suction pressure and motor speed of 1450 rpm | Motor power in kW |
| HAUG.Sirius 22G 75-35 LM-L | 1.0 | 3.0 | 5.0 | 51.0 | 34 | 11.0 |
| HAUG.Sirius 22G 90-40 LM-L | 1.0 | 2.0 | 3.0 | 51.0 | 34 | 11.0 |
| HAUG.Sirius 42G 100-45 LM-L | 1.0 | 2.0 | 2.5 | 51.0 | 84 | 22.0 |

Oil-free booster compression of natural gas and biomethane

HAUG biomethane and natural gas booster compressors are used to feed natural gas networks or to raise the pressure between two natural gas network lines. An alternative use is the storage and use of biomethane or natural gas in a gas motor or in a thermal power station. Thanks to their oil-free and gas-tight operation mode, HAUG compressors are perfect to compress efficiently the climate-harming methane without leaks.

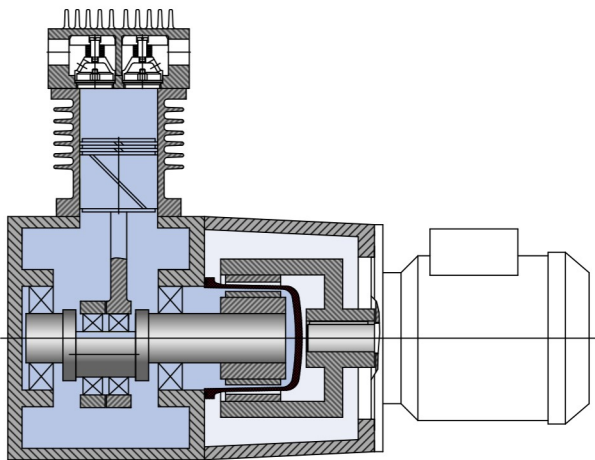


| HAUG.Sirius compressors for booster compression of natural gas and biomethane | | | | | | |
|---|-----------------------------------|-----|--------------------------------------|----|---|-------------------|
| | min. suction pressure in bar(abs) | | average suction pressure in bar(abs) | | max. suction pressure in bar(abs) | |
| | | | | | Flow rate in Nm ³ /h at average suction pressure and motor speed of 1450 rpm | Motor power in kW |
| HAUG.Sirius 21G 90 LM-L | 5.0 | 6.0 | 7.0 | 17 | 240 | 15.0 |
| HAUG.Sirius 21G 120 LM-L | 5.0 | 6.0 | 7.0 | 10 | 470 | 15.0 |
| HAUG.Sirius 31G 90 LM-L | 5.0 | 6.0 | 7.0 | 17 | 360 | 22.0 |
| HAUG.Sirius 31G 120 LM-L | 5.0 | 6.0 | 7.0 | 10 | 700 | 22.0 |
| HAUG.Sirius 41G 90 LM-L | 5.0 | 6.0 | 7.0 | 17 | 480 | 30.0 |
| HAUG.Sirius 41G 120 LM-L | 5.0 | 6.0 | 7.0 | 10 | 930 | 30.0 |

HAUG.Sirius with magnetic coupling

The HAUG.Sirius series has been used since 1973 for compression of air and gases and is a very mature compressor concept which, over the decades, has been continuously improved and developed. In the meantime, countless variants have been made available for different applications.

HAUG.Sirius compressors with magnetic coupling were developed by HAUG Sauer and provide compression of gases without leaks. This hermetically sealed and entirely wear-free drive was first employed by HAUG Sauer in a piston compressor in 1989 and can be used for suction pressures up to 31 bar(abs).



Magnetic coupling

With the HAUG compressor design, a permanent leak rate of less than 0.001 mbar l/s is achieved

- Permanent, hermetic gas-tight compressors at standstill and in operation
- The hermetically sealed piston compressor is achieved by a magnetic coupling drive
- No wear of the sealing element
- No sealing gas
- No loss of energy

High suction pressure

- Suction pressure up to 31 bar(abs)
- Hermetically gas-tight, no gas loss and wearout
- Low energy consumption, better efficiency, lower power requirements
- Compact compressor





Sauer Compressors

The HAUG Sauer Kompressoren AG based in St. Gallen, Switzerland, is within the Sauer Compressors Group the competence center for oil-free and gas-tight piston compressors. These are developed and manufactured in St. Gallen for worldwide use.



Find your contact for sales and services below
www.sauercompressors.com

For further information about our products and applications please visit our website www.haug.ch



Compressor system for nitrogen booster compression in ATEX design

Features

- Completely oil-free and dry-running piston compressor
- Permanently technically tight with magnetic coupling
- Environmentally friendly because it is oil-free, gas-tight and efficient
- HAUG.Sirius compressor block leak rate < 0.001 mbar l/s
- Air-cooled or water-cooled versions
- Motor power from 7.5 to 30 kW
- Rotary speed range 970 to 1450 1/min
- Suction pressure max. 31 bar(abs)
- Final discharge pressure max. 101 bar(abs)
- Modular cylinder configuration with cylinder diameter up to 180 mm
- Versions with 2, 3 or 4 cylinders with 1-, 2-, 3- or 4-stages execution
- Maximum flow rate at atmospheric intake pressure approx. 400 Nm³/h
- Booster compressor version flow rate max. approx. 1000 Nm³/h
- Explosion-proof compressor version (conform with ATEX zone 1 or zone 2)
- Very robust and long-lasting construction
- Compact and foundation-free installation



We reserve the right to make technical changes at any time without prior notice.